UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,738	04/06/2001	Richard Hans Harvey	063170.6797	6701

5073 7590 06/28/2006

BAKER BOTTS L.L.P.
2001 ROSS AVENUE
SUITE 600
DALLAS, TX 75201-2980

EXAMINER	
FLEURANTIN, JEAN B	

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/827,738	HARVEY, RICHARD HANS	
	Examiner	Art Unit	
	JEAN B. FLEURANTIN	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This is in response to Applicant(s) arguments filed on 4/14/06.

2. Claims 1-28 remain pending for examination.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 13, 14 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification, as originally filed, fails to provide support for "using the first table to create a second table". Paragraph [0012], of the specification discloses "creating a first table adapted for storing the data and having one row for each data entry, and creating a second table adapted for storing data components and having one row for each component of the stored data type." This is not equivalent to "using the first table to create a second table." See claim 1, line 6, applicant's amendment.

Response to Applicant' Remarks

4. Applicant's arguments with respect to claims 1-28 have been fully considered but they are not persuasive. Because of the following reasons, see sections A and B.

Claim Rejections - 35 USC § 103

A. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-12, 14-17 and 22-28 are rejected under 35 U.S.C. l03(a) as being unpatentable over C.M.R. Leung, "an object-oriented approach to directory systems - 1990" ("Leung") in view of Hong et al., "Design and Implementation of a Distributed Applications Tested - 1993" ("Hong").

As per claims 1 and 14, Leung discloses "a method of arranging data in a database" (page 736, col. 1, paragraph 4) comprising:

"creating a first table adapted for storing data" (i.e., the DIT table holds (storing/holding) the information of the structure of the DIT; see Fig. 6 table DIT; page 739, col. 1, paragraph 1, lines 3-4) comprising at least one data entry" (i.e., attribute type; see page 739, col. 1, paragraph 1, line 10), "the data entry comprising a plurality of data components" (i.e., entry is made up of attributes, each with a type and more values; see page 737, col. 1, paragraph 2, lines 5-6), "the first table comprising one row for each entry" (see Fig. 6 DIT); and

"second table comprising one row for each of the plurality of data components" (i.e., entry is made up of attributes, each with a type and more values; see Fig. 6, and ENTRY; page 737, col. 1, paragraph 2, lines 5-6). Leung fails to explicitly disclose ~~creating~~ using the first table to create a second table adapted for storing data components and having one row for each component of the data. However, Hong discloses ~~creating~~ using the first table to create a second table adapted for storing data

components and having one row for each component of the data of the data entry of the first table (see Hong page 172, col. 2, paragraph 3.2, lines 18-29). It would have been obvious to one ordinary skill in the art at the time the invention was made to modify of Leung by using the first to create a second table adapted for storing data components and having one row for each component of the data of the data entry of the first table. Such a modification would allow the method of Leung to provide increase reliability and performance of the directory searching methods and systems (see Hong page 170, col. 1, paragraph introduction), thereby improving the accuracy of the directories searching methods and systems.

As per claims 2 and 15, Leung discloses "the data is a structured data type" (i.e., attribute type; see page 739, col. 1, paragraph 1, line 10).

As per claims 3 and 16, Leung discloses "the data is a string data type" (i.e., attribute type; see page 739, col. 1, paragraph 1, line 10).

As per claim 4, Leung discloses "the data is or represents a X.509 certificate" (i.e., DSEP decodes the request and passes the decoded request in the form of Directory Abstract Services with the appropriate parameters to DOP; see figure 2, page 737, col. 2, paragraph 5).

As per claims 5 and 26, Leung discloses "a selected one of the data components is a checksum or fingerprint " (i.e., a means for collecting the results; see page 738, col. 1, paragraph 1).

As per claims 6 and 23, Leung discloses "where the database is a pm of an electronic directory services system" (i.e., the database systems used form an indispensable part of the directory systems; see page 736, col. 1, paragraph 4, lines 4-5).

As per claims 7 and 24, Leung discloses "where the electronic directory services system comprises an X.5OO and LDAP services system" (i.e., a directory (X.500) consists of one or more distributed Directory System Agents where directory information is kept and user requests are proposed, the DIT and DIB are partitioned and distributed in these DSAS each DSA also holds knowledge of the distribution of the DIT all requests in the form of directory abstract services from directory users must be submitted through Directory User Agents acting as the interface between the users; see Fig. 2 page 737, paragraphs 2 and 3).

As per claim 8, Leung discloses "a database having a data storage arrangement" (see page 739, col. 1, paragraph 1, line 2) "comprising a search table" (see page 739, col. 1, paragraph 2) "comprising at least one row having a plurality of columns" (i.e., wherein the DIT and ENTRY stored as two relational tables the DIT table holds the information of the structure of the DIT; see page 739, col. 1, paragraph 1), "each column of the at least one row storing a data component" (i.e., each record contains (storing) the system identifier of that of its object that of its parent and its RDN; see page 739, col. 1, paragraph 1); and

"a subsearch table created from the search table, the subsearch table" (see page 739, col. 1, paragraph 2) "comprising one row for each data component of the search table" (i.e., wherein the DIT and ENTRY stored as two relational tables the DIT table holds the information of the structure of the DIT; see page 739, col. 1, paragraph 1), "each row having a plurality of columns" (i.e., the ENTRY table holds detailed information about each directory object, each record holds the system identifier of an object and an attribute value of an attribute of the object in both normalized (see page 739, col. 1, paragraph 1).

Leung fails to explicitly disclose including a component identifier column configured to be used as a search index for searching data components in the at least one row of the search table. However, Hong discloses including a component identifier column configured to be used as a search index for searching data components in the at least one row of the search table (see Hong page 172, col. 1, paragraph 5 to page 173, col. 1, paragraph 2). It would have been obvious to one ordinary skill in the art at the time the invention was made to modify system of Leung by including a component identifier column configured to be used as a search index for searching data components in the at least one row of the search table. Such a modification would allow the teachings of Leung to provide increase reliability and performance of the directory searching methods and systems (see Hong page 170, col. 1, paragraph [introduction]). thereby improving the accuracy of the directories searching methods and systems.

As per claims 9 and 10, in addition to claim 8, Leung further discloses "the columns of the search table are in the form "ED, AID, VID, Norm", where EID identifies an object to which a value belongs, AID identifies an attribute type of the value, and VID identifies one of a possible number of attribute values in the one entry" (i.e., the ENTRY table holds detailed information about each directory object, each record

holds the system identifier of an object and an attribute value of an attribute type (see Fig 6 page 739, col. 1, paragraph 1).

As per claim 11, in addition to claim 8, Leung further discloses "a subattribute table containing at least one row having a plurality of columns in which a description or reference to the subsearch table is provided" (i.e., the ENTRY table holds detailed information about each directory object, each record holds the system identifier of an object and an attribute value of an attribute type (see Fig 6 page 739, col. 1, paragraph 1).

As per claim 12, in addition to claim 11, Leung discloses "the columns of the subattribute table are in the form "CID, SYN, DESC, OBJECT ID, FLAGS"' (see Fig. 6).

As per claim 17, Leung discloses "an X.500 or LDAP directory services system" (see page 736, col. 1, paragraph 4).

As per claim 27, the limitations of claim 27 are rejected in the analysis of claim 5 and this claim is rejected on that basis.

As per claim 22, in addition to claim 1, Leung further discloses "a method of searching a database for given data entries" (see page 738, col. 1, paragraph 4);

"identifying a component identifier indicating a data type that is associated with the component of the first table" each record holds the system identifier of an object and an attribute value of an attribute type of the object in both normalized and raw form (see page 739, col. 1, paragraph 1);

"using the component identifier indicating the data type to execute one of an exact or initial matching on a column of a second table in order to locate the component in the second table" (i.e., record contains the system identifier of an object and the RDNs are coded in such a way that matching them can be done efficiently (see page 739, col. 1, paragraph 1), "the second table comprising one row for each of the plurality of data components of the given entry of the first table"; and

"returning the given data entry from the first table matching the component located" (i.e., returning details of ENTRYs which satisfying the search conditions; see page 739, col. 1, paragraph 2).

As per claim 25, in addition to claim 4, Leung discloses "the data is or represents a X.500 certificate, and / or a check sum of the data and or a fingerprint of the data" (see page 736, col. 1, paragraph 4).

As per claim 28, Leung further discloses "components of the checksum or fingerprint are searched" (i.e., means for collecting the results it passes them to DSEP in the form of directory abstract services results (see page 738, col. 1, paragraph 1).

5. Claims 13 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over C.M.R. Leung, "An object-oriented approach to directory systems - 1999" ("Leung") in view of Hong et al., "Design and Implementation of a Distributed Applications Tested - 1993" ("Hong") as applied to claims 1-12, 14-17 and 22-28 above, and further in view of M.A. Bauer et al., "A simulation Model for X.500 Directories Initial Experiences - 1991" ("Bauer").

As per claims 13 and 18, in addition to claim 1, Leung fails to explicitly disclose a third table directed to one or more selected components of the one or more values of the second table and configured to have one for each component of each of the one or more values. Bauer discloses a third table directed to one or more selected components of the one or more values of the second table and configured to have one for each component of each of the one or more values (see Bauer page 265, col. 2, paragraph 4 [results]).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify of Leung with a third table directed to one or more selected components of the one or more values of the second table and configured to have one for each component of each of the one or more values. Such a modification would allow the teachings of Leung and Hong to provide directory services in a distributed system environment and to evaluate changes to the standard (see Bauer page 255, abstract).

As per claim 19, Leung discloses "the data is a structured data type" (i.e., attribute type; see page 739, col. 1, paragraph 1, line 10).

As per claim 20, Leung discloses "the data is a string data type" (i.e., attribute type; see page 739, col. 1, paragraph 1, line 10).

As per claim 21, Leung discloses "an X.500 or LDAP directory services system" (see page 736, col. 1, paragraph 4).

B. In response to applicant's argument, page 7, paragraph section (A) and page 14, paragraph section (B) "The proposed combinations are improper," the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Leung fails to explicitly disclose steps of ~~creating~~ using the first table to create a second table adapted for storing data components and having one row for each component of the data. However, Hong discloses ~~creating~~ using the first table to create a second table adapted for storing data components and having one row for each component of the data of the data entry of the first table (see Hong page 172, col. 2, paragraph 3.2, lines 18-29). It would have been obvious to one ordinary skill in the art at the time the invention was made to modify of Leung by using the first to create a second table adapted for storing data components and having one row for each component of the data of the data entry of the first table. Such a modification would allow the method of Leung to provide increase reliability and performance of the directory searching methods and systems (see Hong page 170, col. 1, paragraph introduction), thereby improving the accuracy of the directories searching methods and systems.

In response to applicant's argument, page 8, paragraph 2, the proposed Leung-Hong combination does not disclose, teach, or suggest "using the first table to create a second table adapted for storing the plurality of data components of the entry of the first table, the second table comprising one row for each of the plurality of data entry of the first table," as recited in claim 1. As indicated in the rejection (see section A), the combination Leung in view of Hong discloses the claimed limtations.

Applicant(s) stated, page 8, paragraph 2, In the Office action, the Examiner that Leung fails to disclose "a second table adapted for storing data components and having one row for each component of data." The Office action clearly stated that: Leung fails to explicitly disclose a second table adapted for storing data components and having one row for each component of the data. However, Hong discloses creating a second table adapted for storing data components and having one row for each component of the data (see Hong page 172, col. 2, paragraph 3.2). It would have been obvious to one ordinary skill in the art at the time the invention was made to modify of Leung by creating a second table adapted for storing data components and having one row for each component of the data as disclosed by Hong (see Hong page 172, col. 2, paragraph 3.2). Such a modification would allow the method of Leung to provide increase reliability and performance of the directory searching methods and systems (see Hong page 170, col. 1, paragraph introduction), thereby improving the accuracy of the directories searching methods and systems.

In response to applicant's argument, page 15, paragraph 2, that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

MPEP 2111: During patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification" Applicant always has the opportunity to amend the claims during prosecussion and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969). The court found that applicant was advocating ... the impermissible importation of subject matter from the specification into the claim. See also In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997) (The court held that the PTO is not required, in the course of prosecution, to interpret claims in applications in the same manner as a court would interpret claims in an infringement suit. Rather, the "PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definition or otherwise that may be afforded by the written description contained in application's specification.").

The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. In re Cortright, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999).

For the above reasons, it is believed that the last Office Action was proper.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

CONTACT INFORMATION

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEAN B. FLEURANTIN whose telephone number is 571 – 272-4035. The examiner can normally be reached on 7:05 to 4:35.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 571 – 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jean Bolte Fleurantin

Patent Examiner

Technology Center 2100

June 21, 2006

SHAHID ALAM
PRIMARY EXAMINER